



IPM

Docket No.: 5000-0192PUS1  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Jordi TORMO I BLASCO et al.

Application No.: 10/589,876

Confirmation No.: 2828

Filed: August 18, 2006

Art Unit: N/A

For: 5,6-DIALKYL-7-  
AMINOTRIAZOLOPYRIMIDINES, METHOD  
FOR THEIR PRODUCTION, THEIR USE FOR  
CONTROLLING PATHOGENIC FUNGI, AND  
AGENTS CONTAINING SAID COMPOUNDS

Examiner: Not Yet Assigned

**LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Subsequent to the filing of the above-identified application on August 18, 2006, attached hereto is an English translation of the International Preliminary Examination Report on Patentability issued by the International Bureau on behalf of Searching Authority. Please make this document of record for the above- identified application.

Application No.: 10/589,876

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or to credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated: November 27, 2007

Respectfully submitted,

By 

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Attachment(s)



**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|  |   |   |
|--|---|---|
| Applicant's or agent's file reference<br><b>0000055414</b>   | <b>FOR FURTHER ACTION</b>                                       | See Form PCT/IPEA/416                               |
| International application No.<br><b>PCT/EP2005/002426</b>  | International filing date (day/month/year)<br><b>08.03.2005</b> | Priority date (day/month/year)<br><b>10.03.2004</b> |
| International Patent Classification (IPC) or national classification and IPC<br><b>C07D487/04, A01N43/90</b> |   |   |
| Applicant<br><b>BASF Aktiengesellschaft</b>  |   |   |

|   |
|---|
| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.  |
| 2. This REPORT consists of a total of _____ sheets, including this cover sheet.   |
| 3. This report is also accompanied by ANNEXES, comprising:<br>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>2</u> sheets, as follows:<br><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).<br><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.<br>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. This report contains indications relating to the following items:<br><input checked="" type="checkbox"/> Box No. I Basis of the report<br><input type="checkbox"/> Box No. II Priority<br><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability<br><input type="checkbox"/> Box No. IV Lack of unity of invention<br><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement<br><input type="checkbox"/> Box No. VI Certain documents cited<br><input type="checkbox"/> Box No. VII Certain defects in the international application<br><input type="checkbox"/> Box No. VIII Certain observations on the international application  |

|   |                                   |
|---|-----------------------------------|
| Date of submission of the demand        | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer                |
| Facsimile No.                           | Telephone No.                     |

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/002426

| Box No. I | Basis of the report   |
|-----------|---|
| 1.        | <p>With regard to the <b>language</b>, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:</p> <p style="margin-left: 20px;"> <input type="checkbox"/> international search (Rule 12.3 and 23.1(b))<br/> <input type="checkbox"/> publication of the international application (Rule 12.4)<br/> <input type="checkbox"/> international preliminary examination (Rule 55.2 and/or 55.3)         </p> <p>2. With regard to the <b>elements</b> of the international application, this report is based on <i>(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)</i>:</p> <p><input type="checkbox"/> the international application as originally filed/furnished</p> <p><input checked="" type="checkbox"/> the description:</p> <p style="margin-left: 20px;">pages <u>1-18</u> _____ as originally filed/furnished</p> <p style="margin-left: 20px;">pages* _____ received by this Authority on _____</p> <p style="margin-left: 20px;">pages* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the claims:</p> <p style="margin-left: 20px;">nos. _____ as originally filed/furnished</p> <p style="margin-left: 20px;">nos.* _____ as amended (together with any statement) under Article 19</p> <p style="margin-left: 20px;">nos.* <u>1-10</u> _____ received by this Authority on <u>16.05.2006 with telefax</u></p> <p style="margin-left: 20px;">nos.* _____ received by this Authority on _____</p> <p><input type="checkbox"/> the drawings:</p> <p style="margin-left: 20px;">sheets _____ as originally filed/furnished</p> <p style="margin-left: 20px;">sheets* _____ received by this Authority on _____</p> <p style="margin-left: 20px;">sheets* _____ received by this Authority on _____</p> <p><input type="checkbox"/> a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.</p> <p>3. <input type="checkbox"/> The amendments have resulted in the cancellation of:</p> <p style="margin-left: 20px;"> <input type="checkbox"/> the description, pages _____<br/> <input type="checkbox"/> the claims, nos. _____<br/> <input type="checkbox"/> the drawings, sheets/figs _____<br/> <input type="checkbox"/> the sequence listing (<i>specify</i>): _____<br/> <input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____         </p> <p>4. <input type="checkbox"/> This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).</p> <p style="margin-left: 20px;"> <input type="checkbox"/> the description, pages _____<br/> <input type="checkbox"/> the claims, nos. _____<br/> <input type="checkbox"/> the drawings, sheets/figs _____<br/> <input type="checkbox"/> the sequence listing (<i>specify</i>): _____<br/> <input type="checkbox"/> any table(s) related to sequence listing (<i>specify</i>): _____         </p> |

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2005/002426

**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

## 1. Statement

|                               |        |      |     |
|-------------------------------|--------|------|-----|
| Novelty (N)                   | Claims | 1-10 | YES |
|                               | Claims |      | NO  |
| Inventive step (IS)           | Claims | 1-10 | YES |
|                               | Claims |      | NO  |
| Industrial applicability (IA) | Claims | 1-10 | YES |
|                               | Claims |      | NO  |

## 2. Citations and explanations (Rule 70.7)

**V.1 Cited documents**

D1: EP-A-0 141 317 (BASF AKTIENGESELLSCHAFT)  
15 May 1985 (1985-05-15)

D2: WO 03/009687 A (BASF AKTIENGESELLSCHAFT; TORMO  
I BLASCO, JORDI; SAUTER, HUBERT; MUELLE)  
6 February 2003 (2003-02-06)

D3: EP-A-0 215 382 (BASF AKTIENGESELLSCHAFT)  
25 March 1987 (1987-03-25)

D4: GB-A-1 148 629 (VEB. DEUTSCHES HYDRIERWERK  
RODLEBEN) 16 April 1969 (1969-04-16)

D5: EP-A-0 770 615 (AMERICAN CYANAMID COMPANY;  
BASF AKTIENGESELLSCHAFT) 2 May 1997  
(1997-05-02)

The same designations will be used throughout the  
procedure.

**V.2 Novelty**

**V.2.1** The subject matter of claims 1-10 is  
encompassed in generic terms by the subject matter of  
claims 1-6 of document D1. However, D1 does not include  
any specific individual compounds which fall within the  
present claims: in those specific D1 compounds in which

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement   |
|-----------|---|
|           | <p><math>R^2</math> is n-propyl or n-butyl, the <math>R^1</math> radical falls just outside the range claimed in the application, and, in those specific D1 compounds in which <math>R^1</math> falls within the range claimed here, <math>R^2</math> is not n-propyl or n-butyl (see D1, table on pages 9 and 10). The subject matter of the present claims therefore involves a new selection from D1.</p> <p><b>V.2.2</b>        The subject matter of the present claims differs from the disclosure in D2 by the definition of the <math>R^2</math> group, which corresponds to the X group in D2.</p> <p><b>V.2.3</b>        The subject matter of the present claims differs from the compounds disclosed in D3 at least in that the radical corresponding there to the <math>R^1</math> group always bears an aryl group.</p> <p><b>V.2.4</b>        In the compounds disclosed in D4, the alkyl group corresponding to <math>R^1</math> has only a maximum of 4 carbon atoms.</p> <p><b>V.2.5</b>        D5 discloses a process for preparing the intermediates of the formulae IV and V. However, in the compounds mentioned specifically in D5, the radical corresponding to the <math>R^1</math> group is phenyl.</p> <p><b>V.2.6</b>        The subject matter of all present claims is therefore novel.</p> |
|           | <p><b>V.3            Inventive step</b></p> <p><b>V.3.1</b>        According to the description, the problem underlying the application is considered to be that of providing 5,6-dialkyl-7-aminotriazolopyrimidines which are superior in their fungicidal action to the similar compounds known from D1.</p>  |

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

**V.3.2** Relevant prior art for the subject matter of claim 1 is the documents D1 to D3, since they disclose fungicidally active 7-aminotriazolopyrimidines. The structurally closest prior art is D1, since it discloses compounds from which the compounds according to the application differ either only with regard to the R<sup>1</sup> group (compounds 16, 21, 23, 42 and 48 from D1) or from which they differ only with regard to the R<sup>2</sup> group (e.g. compounds 4, 10, 11, 12, 29 from D1). In generic terms, the compounds according to the application are encompassed completely by the disclosure of D1 (see D1, claims).

**V.3.3** A person skilled in the art faced with the problem defined above would certainly be induced by the general disclosure from D1 to prepare novel compounds which are, though, within the generic disclosure of D1, while being able to assume that these compounds would likewise have fungicidal properties. This is precisely what has been done in the present case. The applicant has combined R<sup>1</sup> groups of compounds mentioned explicitly in D1 and R<sup>2</sup> groups of other compounds mentioned explicitly in D1 and has thus arrived directly at the compounds according to the application. It is therefore fundamentally unsurprising that the compounds according to the application likewise have fungicidal action, like the D1 compounds.

**V.3.4** The applicant has submitted comparative tests between particular compounds according to the application and compounds mentioned specifically in D1, from which it is evident that, when R<sup>2</sup> is n-propyl or n-butyl and R<sup>1</sup> simultaneously corresponds to the specific definition

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

given in claim 1 (a combination as has not been verified in D1), a significant improvement in the action against particular harmful fungi occurs compared to structurally similar compounds mentioned specifically in D1. For comparison, compounds from D1 whose substituent corresponding to  $R^2$  is likewise n-propyl or n-butyl were used, such that the structural difference is determined merely by  $R^1$ . In this context, an unforeseeable significant improvement in action occurred in the tested compounds according to the application with the  $R^1$  radicals =  $C_5$ -alkyl or  $C_5$ -alkyl or  $C_6$ -alkoxyethylene or  $C_8$ -alkoxyethylene.

**V.3.5** The comparative tests show that, with the subject matter of the claims, the above-defined technical problem has indeed been solved. The improvement in action owing to the specific substituent  $R^1$ , which has been made plausible with the comparative experiments, is not suggested in the relevant prior art and is therefore surprising.

**V.3.6** Inventive step can therefore be acknowledged for the subject matter of the present claims 1-10.

**V.4 Industrial applicability**

The subject matter of claims 1-10 is industrially applicable.